Abstract of the Disclosure

A HMM modification method for preventing an overfitting problem, reducing the number of parameters and avoiding gradient calculation by implementing a weighted loss function for misclassification measure and computing a delta coefficient in order to modify a HMM weight is disclosed. The HMM modification method includes the steps of: a) performing Viterbi decoding for pattern classification; b) calculating misclassification measure using discriminant function; c) obtaining modified misclassification measure for a weighted loss function; d) computing a delta coefficient according to the obtained misclassification measure; e) modifying HMM weight according to the delta coefficient; and f) transforming classifier parameters for satisfying a limitation condition.